TANKS ILLUSTRATED No 20

ALLIED TANKS ITALY

World War Two

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Introduction

Comparatively few people today would regard the Italian Campaign of 1943–45 as being one in which the use of armour was critical, yet one has only to consider the fearful loss of life incurred in the capture of Montecassino to digest the full implications of what happened in circumstances where tanks were unable to influence the nature of the fighting. Elsewhere, although the terrain also favoured the defence, it was the combination of all arms, coupled with sound tactics, that ensured a slow but sustained Allied advance up the peninsula. In Italy teamwork between reconnaissance units, tanks, tank destroyers, artillery, infantry and assault engineers was brought to a pitch of efficiency sometimes equalled but seldom bettered in other theatres of war; in the end, the reward for such continuous effort was a dashing pursuit of the beaten enemy and the first German surrender on the mainland of Europe.

It would be impossible in a book this size to tell the full story of Allied armour in Italy, or even attempt to do justice to the many armoured units from all over the world who fought there. Rather, my aim has been to capture the feel of soldiering in armour in Italy, including some aspects which were peculiar to this theatre of war. I hope that those who were there will find the photographs evocative, and that those who were not will discover a little of what it was like. My sincere thanks are due to the following for their invaluable assistance in assembling this collection: the National Army Museum; the Queen Elizabeth II Army Memorial Museum, New Zealand; the Public Archives, Canada; the South African National Museum of Military History (SANMMH); The United States Army Military History Institute (USAMHI), and James Enos; the Sikorski Polish Institute; and Krzysztof Barbarski.

Bryan Perrett

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1. (**Title spread**) A panoramic view of the US 755th Tank Battalion in action as supplementary artillery at Pietromala on 1 October 1944. In addition to the three tank battalions serving with the 1st Armored Division (1st, 4th and 13th) a number of non-divisional tank battalions also served in Italy, including the 191st, 751st, 752nd, 753rd, 755th, 756th, 757th, 758th and 760th. These generally fought in support of infantry divisions. (USAMHI)
2. A view of the modified turret fitted to the up-gunned M4A1, in this case mounting the 76mm M1A1C weapon, a development of the M1A1 modified with a muzzle brake. This fitting made the gun muzzle-heavy, so that when out of contact it was supported in a travelling crutch. To dispense with the crutch the gunner would apply elevation to open the clamp and it would fall back on to the glacis plate. The photograph was taken in April 1945 when the Allies' final offensive was in full swing, and this veteran crew are clearly in a relaxed and confident mood. (SANMMH)

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3. For the invasion of Sicily the 4th Armoured Brigade, consisting of the Royal Scots Greys, the 3rd County of London Yeomanry (The Sharpshooters) and the 44th Royal Tank Regiment, became an independent formation. The photograph shows tanks of the Sharpshooters' A Squadron shackled down to the deck of their LST, still wearing their desert colours. Although official colour schemes were laid down, a variety of finishes could be found within the 8th Army at this period, depending upon whether tanks had remained with their regiments throughout, or had recently returned from base workshops, or had been issued shortly after their arrival in the theatre. These included dark green over desert pink or light stone, blue-black over dark sand, plain sand, or plain bronze-green. (National Army Museum)

4. The 4th Armoured Brigade took part in the 8th Army's landing on the Italian mainland at Taranto on 9 September 1943, the codenames for which was 'Slapstick'. Here tanks of A Squadron, 3rd County of London Yeomanry, move out of the dock area. On the turret roof of the nearest Sherman is the Allied air recognition roundel; further markings on the turret side include the red/white/red ground recognition panel with the A Squadron triangle just behind, and the vehicle code number of the turret bin – the Sharpshooters had their own system of internal coding, which differed radically from the usual RAC practice. Thin gauge metal coamings have been welded to the side of the engine deck, providing an ingenious method of rapid stowage. (National Army Museum)

5. This photograph, taken from the turret of the troop leader's tank, demonstrates the principles of fire and movement within a three-tank troop. Two tanks are crossing the exposed railway line at speed and will probably take the low crest in the middle distance as their next bound. The third tank, on the right, provides cover during the movement, positioning itself against the most likely source of trouble, the ruined station. It will then be covered in turn as it moves up to join the rest of the troop on the next bound. (National Army Museum)

6. A tank transporter uses its winch to extract a Sherman from the large-calibre shell crater in which it has become bogged. The tank's immaculate interior and exterior paintwork suggests that it is brand new and has only recently been issued by the Tank Delivery Squadron. (National Army Museum)

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7. 3rd CLY tank crews examine a captured 75mm Pak 40 anti-tank gun which has been concealed between two haystacks. (National Army Museum)

8. Farewell to old friends. The 3rd County of London Yeomanry (The Sharpshooters) are numbered among a very distinguished group of the Royal Armoured Corps' Territorial regiments which served in North Africa, Sicily, Italy, Normandy and North-West Europe. The regiment left Italy in December 1943. (National Army Museum)

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9. In British service the 105mm Howitzer Motor Carriage M7 was known as the Priest. Some suggest that the title was conferred because of the commander's pulpit, but the Royal Artillery had begun naming its self-propelled weapon systems after churchmen and there were already a Deacon and a Bishop. This gun is firing in support of the final Allied assault on Cassino; the frame protruding over the vehicle's rear is part of the foul-weather canopy. As the Canadian Sexton 25pdr self-propelled gun based on the Ram chassis became available it replaced the Priest in the field regiments of British and Commonwealth armoured divisions. Subsequently, many M7s had their armament removed and ended the war as Kangaroo APCs, in which role they were known as 'Unfrocked Priests'. (Public Archives of Canada)

10. On 23 May 1944 the 1st Canadian Infantry Division, with the 25th Tank Brigade (North Irish Horse, 51st Royal Tank Regiment and 142 Regiment RAC) under command, broke through the elaborate defences of the Hitler Line in a single day, and to honour this combined achievement the divisional commander expressed the wish that the British regiments should add a maple leaf to their uniforms and vehicle markings. At this period the Infantry Tank squadrons in Italy consisted of a Churchill SHQ and two Churchill troops, plus two Sherman troops. The Shermans would lie back and shoot in the assault, while the more heavily armoured Churchills would lead it. (Public Archives of Canada)

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11. (**Previous spread**) A fascinating study of a British tank squadron in open leaguer in southern Italy during the autumn of 1943. The troop areas and bivouacs are clearly defined and the crews are engaged in their various domestic chores. Some of the tanks are still in their North African colour scheme while others, more recently issued, have the bronze-green finish more often associated with this campaign. A solitary Stuart, probably that of the artillery FOO (Forward Observation Officer), can be seen closest to the centre of the picture. (National Army Museum)
12. When the M10 replaced the 75mm GMC M3 as the US Army's principal tank destroyer, a number of the latter were taken into British service and issued to armoured car regiments on the scale of two per squadron. In Italy these Heavy Troops were often concentrated and used as supplementary artillery. On the nearest vehicle the name 'Belching Bella' is just visible on the 75mm recoil slide. (USAMHI)
13. In Italy the 25th Armoured Engineer Brigade, formed in January 1945, performed the same function as the famous 79th Armoured Division and consisted of the 51st Royal Tank Regiment (with two squadrons converted to Crocodiles and one to Sherman Crab flail tanks) and the 1st Armoured Engineer Regiment, Royal Engineers (with Arks, AVREs and other assault engineering equipment). This Crocodile troop of 51 RTR has been attached to the 2nd New Zealand Division for the Senio operation; the tanks would drop the small fascines and then mount them, thus purchasing sufficient elevation to flame over the river's high flood-banks. Immediately below the nearest vehicle's flame gun, on the bow plate, is the brigade sign – a red shield with two vertical blue lines between which is the black diabolo of the 25th Tank Brigade, from which the formation was raised. (New Zealand Official)
14. A Crocodile troop in action during the Senio crossing. On leaving the projector the fluid was ignited electrically and had a range of 120yds, the propellant being pressurized nitrogen. The Crocodiles were easily identified by the armoured trailers in which the flame fluid was carried and were so feared that their mere approach would induce an enemy collapse. (Author)
15. A Churchill ARV (Armoured Recovery Vehicle) Mk. I prepares to recover a Churchill Mk. IV of the 145th (Duke of Wellington's) Regiment RAC. In Italy the various marks of Churchill carried a wider variety of main armament than any other tank, including the 2pdr, 6pdr, 75mm (British), 75mm (ex-Sherman), 3in howitzer and 95mm howitzer. As in this instance, early models of the 6pdr were fitted with a counterweight on the muzzle. (Duke of Wellington's Regiment)

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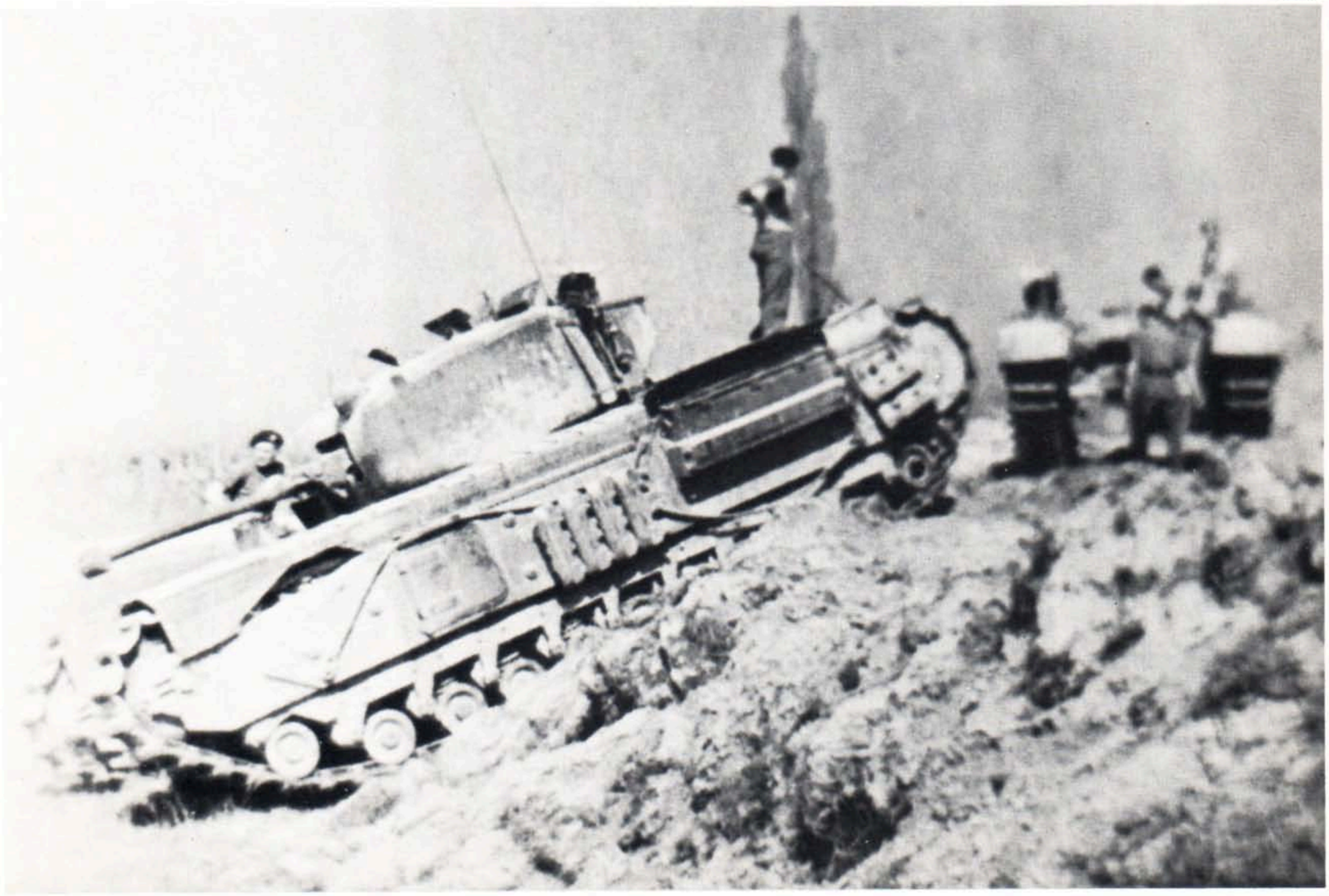

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16. 145 Regiment RAC in open leaguer during the fighting which broke the Gothic Line in the autumn of 1944. Altogether six Churchill regiments fought in this protracted and exhausting series of battles – the North Irish Horse, the 12th, 48th and 51st Royal Tank Regiments, and the 142nd (Suffolk) and 145th (Duke of Wellington's) Regiments RAC. (Duke of Wellington's Regiment)
17. The 6th South African Armoured Division arrived in Italy in April 1944, and this Grant armoured command vehicle (ACV) formed part of the division's tactical headquarters. The original 37mm gun has been stripped out of the top turret and replaced by a much larger dummy gun. (SANMMH)
18. The 6th South African Armoured Division went into the line on the Cassino sector under the command of the Fifth US Army. Here South African and American engineers use timber to shore up a German demolition on a mountain road between Monte Piano and Castigleone di Pepoli. The Humber scout car carries the South African divisional sign and the number '50' indicates that it belongs to HQ 11th Armoured Brigade. The legend 'DON/R' dates from the First World War and is still in verbal use today; it signifies a despatch rider and confers absolute priority over other traffic. (SANMMH)
19. Like any troops fighting their first campaign in armour, the South Africans learned quickly and by experience. In the absence of a tank helmet, for example, the standard British steel helmet is worse than useless, since its rim will actually prevent the wearer ducking his head into the cupola in an emergency! Again, camouflage which fails to break up the outline of turret and hull tends to be wasted effort. (SANMMH)

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20. Wars may come and wars may go, but the land is there for ever . . . A South African Sherman squadron pauses to re-ammunition for its role as supplementary artillery. The farmer, his son and their oxen take advantage of the lull to plough their stony mountain plot. (SANMMH)

21. Tanks of the Special Service Battalion fording the River Arne near Empoli during the hot summer of 1944. The river contains barely sufficient water to wet the vehicles' belly plates. (SANMMH)

22. A South African Sexton 25pdr self-propelled gun on a steep bypass which engineers have constructed around a 'blow'. The original route is clearly marked by the debris of the demolished viaduct, above which a temporary bridge is being erected. The South Africans followed the British system of vehicle marking. (SANMMH)
23. An interesting study of a full troop belonging to the 1st/22nd South African Artillery on the move. The troop leader rides in the jeep in the foreground, followed by the gun position party in a White scout car; then come the four Sexton 25pdr self-propelled guns, and finally the troop's supply echelon. The 6th South African Armoured Division's symbol – a yellow triangle outlined in green – can be seen on several of the vehicles. (SANMMH)

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24. Replacing the Chrysler A-57 Multibank power unit of a Sherman M4A4 near Florence. The Multibank system involved five commercial automobile engines supplying power to a common drive shaft, and the layout is clearly visible in the photograph. At 2,400rpm the system could produce 370hp; its principal disadvantage lay in the diagnosis of faults. (SANMMH)
25. The helmet and faded flowers tell their own story. The Universal Carrier, laden with ammunition boxes on its way forward, belongs to the combined 1st City/Cape Town Highlanders infantry battalion. (SANMMH)

26. Bogged down and awaiting heavy recovery, this Sherman of an unidentified South African unit presents a dismal aspect to the file of infantry coming out of the line. Although none of the crew is visible, the jumble of blankets suggests that they have been sleeping inside the vehicle, a difficult but by no means impossible feat for five men prepared to contort themselves into a series of compressed and unnatural shapes! (SANMMH)
27. A Sherman troop employed in the supplementary artillery role. The precise alignment of the guns and the long aerial indicate that the tanks are involved in a fully indirect engagement; this means that the targets are not in view to the crews and that corrections for range and line are being signalled by a forward observer and then applied to the gun control equipment. The firing point has a semi-permanent look about it, which, given the static conditions prevailing in Italy for months at a time, is hardly surprising. The fact that so much of the stowage remains in place suggests that the troop is here by rotation and does not expect to remain long. (SANMMH)

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28. The excellent camouflage is not compatible with the dust cloud produced by this vehicle's speed and the probability, therefore, is that it is coming out of the line rather than entering it. The unexpected ammunition on the engine deck suggests that it has spent the day on standby in the supplementary artillery role but has not engaged a target, a deduction confirmed by the greenery around the gun, which would otherwise have been burned off by any muzzle-blast. (SANMMH)

29. This South African M4A1 shows the configuration of the redesigned turret required to accommodate the M1A1 76mm main armament. The weapon was slightly breech-heavy, hence the small counterweight on the muzzle. (SANMMH)

30. From May 1944 to February 1945 the 24th Guards Brigade also served under the command of 6th South African Armoured Division, and was then replaced by another infantry brigade, the 13th South African, consisting of divisional troops, the Royal Durban Light Infantry and the 1st Royal Natal Carbineers. Here the Guards and the Pretoria Regiment honour each other at a farewell parade. The latter are now equipped with the Sherman M4A1 mounting the M1A1 76mm gun, but the RHQ Troop tank nearest the camera is a Sherman Firefly armed with the British 17pdr. (SANMMH)

31. German prisoners on their way to the rear aboard a turretless Stuart pass through the 6th South African Armoured Division's tactical headquarters in a Bologna suburb, 21 April 1945. Major General Poole, the division's GOC, is holding an orders group beside his Grant ACV. A chair has been welded to the sponson roof beside the ACV's dummy gun, so providing the general with a comfortable viewpoint. (SANMMH)

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32. The driver of a nicely marked Humber scout car of the Pretoria Regiment considers postwar employment. Within the 11th South African Armoured Brigade the unit codes were '50' for the Brigade HQ; '51' for Prince Alfred's Guard; '52' for the Pretoria Regiment; and '53' for the Special Service Battalion. (SANMMH)

33. A Sherman of B Squadron, Prince Alfred's Guard, overtakes a Universal Carrier on its way forward. The location of the photograph remains unknown but it is believed to have been taken during the last phase of the Allied advance in the spring of 1945. As the muzzle cover is still in place and, more significantly, as ammunition boxes are being carried on the glacis plate, contact with the enemy is clearly not expected. The crew's sense of style is accented by a looted Fascist eagle which perches on the main armament. The regiment's tactical number and the divisional sign can just be seen on the nearside track guard, below the open hatch cover. (SANMMH)

34. The last few miles. The final offensive in Italy saw the 6th South African Armoured Division taking part in the assault on Bologna and the subsequent advance into the Po Valley. Once their forward defences had been penetrated the Germans withdrew rapidly and there was little contact with them until they surrendered on 2 May. (SANMMH)

35. In August 1942 the 1st Canadian Army Tank Brigade (The Ontario Regiment, The Three Rivers Regiment and The Calgary Regiment) became the 1st Canadian Armoured Brigade and later exchanged its Churchills for Shermans, joining the Allied invasion force off Sicily direct from the United Kingdom in July 1943. The canvas sleeve surrounding the hull machine gun is part of the waterproofing required for the vehicle to wade ashore from its LST. (Public Archives of Canada)

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36. Waterproofing was a dirty job, involving the entire crew. Here non-soluble grease is applied to the joints of a Sherman engine's deep-wading extension. (Public Archives of Canada)
37. 'Cobalt' of C Squadron, The Three Rivers Regiment, passing through Agira, Sicily, in July 1943. The positioning of the C Squadron circle on the bow plate is unusual, as is that of the forward recognition panel on the glacis above. Bedrolls and small packs stowed in this manner did not survive for long, as the crew would quickly discover. (Public Archives of Canada).
38. The Three Rivers Regiment fought in support of the 1st Canadian Infantry Division throughout the Sicilian campaign. Here 'Biter', of B Squadron, grinds over the rubble of Regalbuto on 7 August 1943. The other two regiments of the 1st Canadian Armoured Brigade landed at Syracuse after its capture but were not closely involved in the fighting, although the Ontario Regiment was briefly in action at Catania. (Public Archives of Canada)
39. A close-up photo-graph of a Fox armoured car belonging to the 4th Princess Louise's Dragoon Guards, the reconnaissance regiment of the 1st Canadian Infantry Division, seen in the Matese Mountains, 27 October 1943. The Fox was very similar to the Humber armoured car series but was built in Canada by General Motors and was armed with one 0.5in and one 0.3in machine gun, plus smoke grenade dischargers. (Public Archives of Canada)

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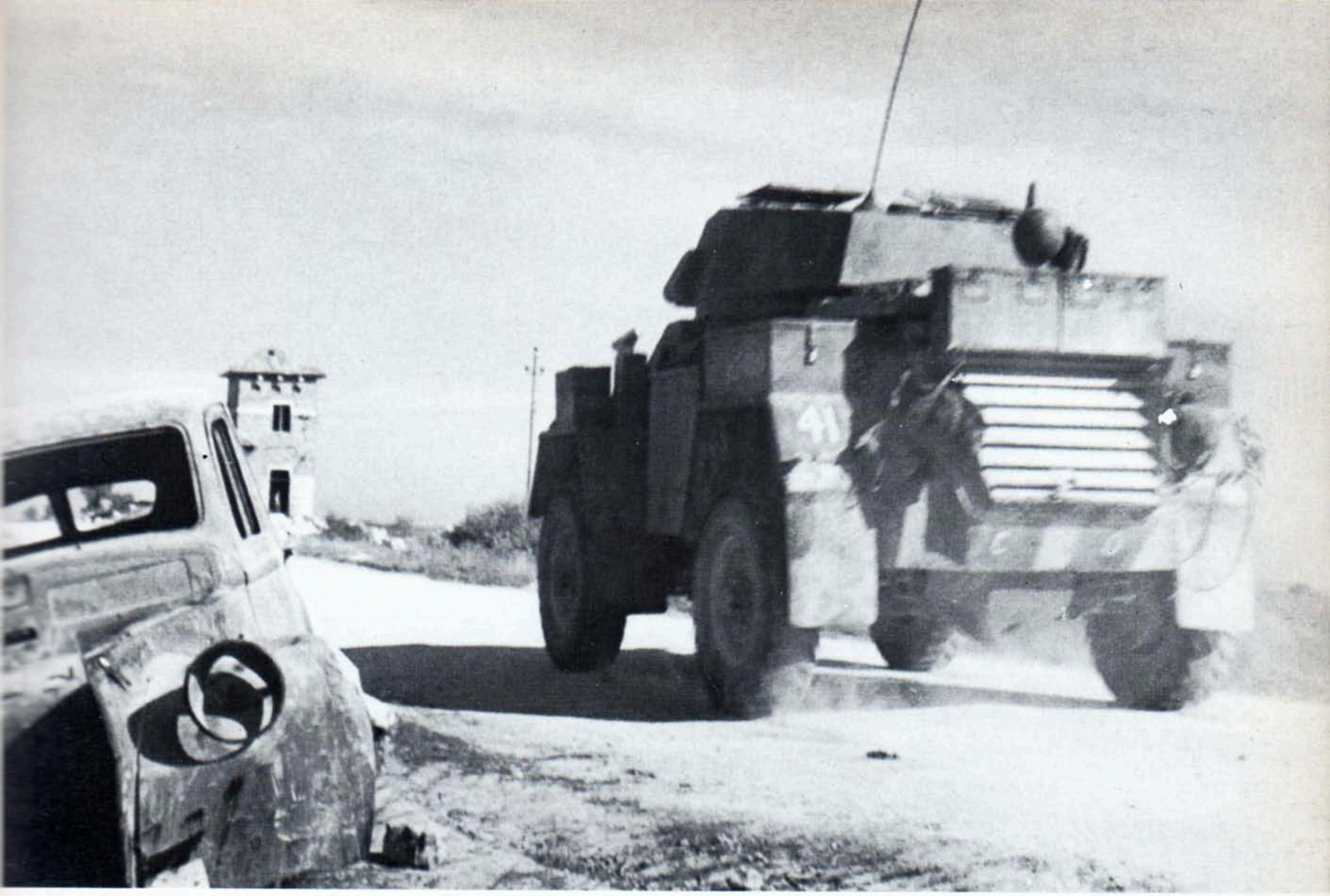
40. A squadron of the 4th Princess Louise's Dragoon Guards passing through Matagane on 26 October 1943. The three leading vehicles are Otter wheeled AFCs belonging to the squadron's assault troop, and are followed by a Fox armoured car troop. The Otter was built in Canada by General Motors using many of the same components as the Fox. Its official designation was 'Car 4×4 Light Reconnaissance, Canadian GM Mark I', and it was armed with a single machine gun. The yellow/blue/white/red air recognition roundel used by the Allies for a period in 1943 can be seen on the engine cover, and the red/white/red ground recognition panel is just visible on the louvres, with the unit's tactical number below. (Public Archives of Canada).

41. Another view of the 4th Princess Louise's Dragoon Guards passing through Montagano, providing interesting marking and rear detail of the Fox armoured car and Otter wheeled APC. (Public Archives of Canada)

42. The CO of the 4th Princess Louise's Dragoon Guards drives past a gutted enemy staff car on the outskirts of Limosano, 26 October 1943. The red/white/red recognition panel has been applied below the engine louvres, together with the vehicle commander's designation. The white figure '41' on a green-over-blue square signified that the vehicle belonged to the armoured reconnaissance regiment of an infantry division. (Public Archives of Canada)

43. The 5th Canadian Armoured Division arrived in Italy in November 1943, its composite formations being the 5th Canadian Armoured Brigade (Lord Strathcona's Horse, the 8th Princess Louise's New Brunswick Hussars and the British Columbia Dragoons) and the 11th Canadian Infantry Brigade, which were joined the following year by the 12th Canadian Infantry Brigade. Like the rest of I Canadian Corps, the division was withdrawn from Italy after the autumn 1944 battles of the Gothic Line and joined the First Canadian Army in the Netherlands. These two Shermans of an unspecified 5th Armoured Brigade unit are seen passing through the village of Castel Frontano on 10 February 1944. (Public Archives of Canada)



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44. To the difficulties imposed on movement in the hills by winter conditions and the enemy's demolitions were added the normal operational hazards. It is uncertain what has happened here, but a night convoy accident seems very likely. The tank on the right is being recovered by a straight winch-pull from two engineer crawler tractors; the vehicle on the left poses more serious problems as it has rolled, shedding its turret. San Leonardo, 31 December 1943. (Public Archives of Canada)

45. The winter rains turned the unsurfaced Apennine tracks into a quagmire passable only to light vehicles with chained wheels, assisted by gritting parties, and in some areas animal transport was the only method of getting food and ammunition up to the front line. Even if tanks could get forward, the difficulties involved in keeping them supplied were immense. The jeep leading this convoy is displaying the Allied air recognition roundel on its bonnet. Orsogna, 27 January 1944. (Public Archives of Canada)

46. Swirling dust provides a dramatic backdrop as this expertly stowed Sherman of the Calgary Regiment drives through a well-wooded Apennine valley in March 1944. In Italy the 'Calgaries' were to avenge their casualties at Dieppe, where they took the Churchill into action for the first time. (Public Archives of Canada)

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47. During Operation 'Diadem', the climactic battle which resulted in the capture of Montecassino, the 1st Canadian Armoured Brigade supported the infantry of the 8th Indian Division. Here vehicle crews give their tanks a final check before breaking leaguer. The camouflage answers all the experts' criteria by eliminating the tanks' shape, texture and reflective surfaces and is correct for the operational landscape. The problem with deciduous camouflage is that it has to be kept fresh – in high summer browning leaves stand out and attract unwelcome attention. (Public Archives of Canada)
48. A beautifully camouflaged White scout car of the Governor General's Horse Guards – the armoured reconnaissance regiment of the 5th Canadian Armoured Division – leaves its harbour area for the 'sharp end'. The photograph is dated 26 May 1944 and there is clearly every cause for celebration, as the Hitler Line has been stormed in one of the most remarkable battles in the history of I Canadian Corps. The Germans are now in full retreat and Rome will fall during the following week. (Public Archives of Canada)
49. The Italian landscape favoured defence and the Germans relied on assault guns and tank destroyers to a greater extent than they did on tanks. They were also adept at concealment, so that the first hint of their presence received by Allied tank commanders was when they opened fire. After scoring a kill they would scuttle away into dead ground if their position was identified. In this case the German commander has used standing crops as cover for his low-slung assault gun – a common device – but the vehicle has been caught while making its getaway, with fatal consequences. (Public Archives of Canada)
50. The Nashorn (Rhino) was a first-generation German tank destroyer issued to heavy tank destroyer battalions and was armed with the formidable L/71 Pak 43/1 anti-tank gun. This example was stalked and killed with a PIAT by infantry working with the 5th Canadian Armoured Brigade on the Pontecorvo sector of the Hitler Line, 26 May 1944. It is, unfortunately, impossible to identify the unit responsible from the photograph as the censor has erased every detail of cap badges and shoulder titles. (Public Archives of Canada)

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51. The 2nd New Zealand Infantry Division had fought in Greece, Crete, the Western Desert and Tunisia before arriving in Italy in November 1943. As soldiers, the 'En Zeds' had very few peers and it took the personal pleas of Winston Churchill and his War Cabinet for the New Zealand Government to change its mind about bringing the division home to fight the Japanese after E1 Alamein. Staghound armoured cars of the Divisional Cavalry Regiment lead the brigades up to the lines in conditions severe enough to require the fitting of chains. (New Zealand Official)

52. The Staghound was a 13-ton armoured car capable of 50mph and was armed with a 37mm gun and a co-axial machine gun. Provision was made for a second machine gun in the glacis but the 2nd New Zealand Divisional Cavalry soon dispensed with this on the basis that the rare contribution it might make did not justify the valuable internal space consumed by a hull-gunner. In this instance the mounting has been blanked over with a bridge classification plate; the regiment's tactical number, '77', and the division's fern leaf symbol are painted on the nearside mudguard locker, which has been improvised from an old ammunition box and is matched by its twin on the offside. This improvisation was typical of seasoned troops and was applied to all the regiment's cars; another point of interest is the ingenious construction of a stowage compartment for wheel chains across the lower glacis. The photograph shows the New Zealand Prime Minister and Lt. Gen. Sir Bernard Freyberg visiting the headquarters of the 5th New Zealand Infantry Brigade near Sora on 31 May 1944. (New Zealand Official)

53. In January 1944 the 2nd New Zealand Division moved into the Cassino sector. The division now consisted of the 4th New Zealand Armoured Brigade (18th, 19th and 20th Armoured Regiments, previously Infantry Battalions), and the 5th and 6th New Zealand Infantry Brigades. This organization is sometimes referred to as the New Model or Mixed Division and differed only slightly from that of an armoured division, but in February 1945 another infantry brigade, the 9th, was added to the establishment, formed from the Divisional Cavalry Regiment, the 22nd Infantry Battalion and the 27th Machine Gun Battalion. (New Zealand Official)

54. New Zealand Shermans in action in the ruins of Cassino town on the day that II Polish Corps captured the monastery and its hill, 18 May 1944. (New Zealand Official)

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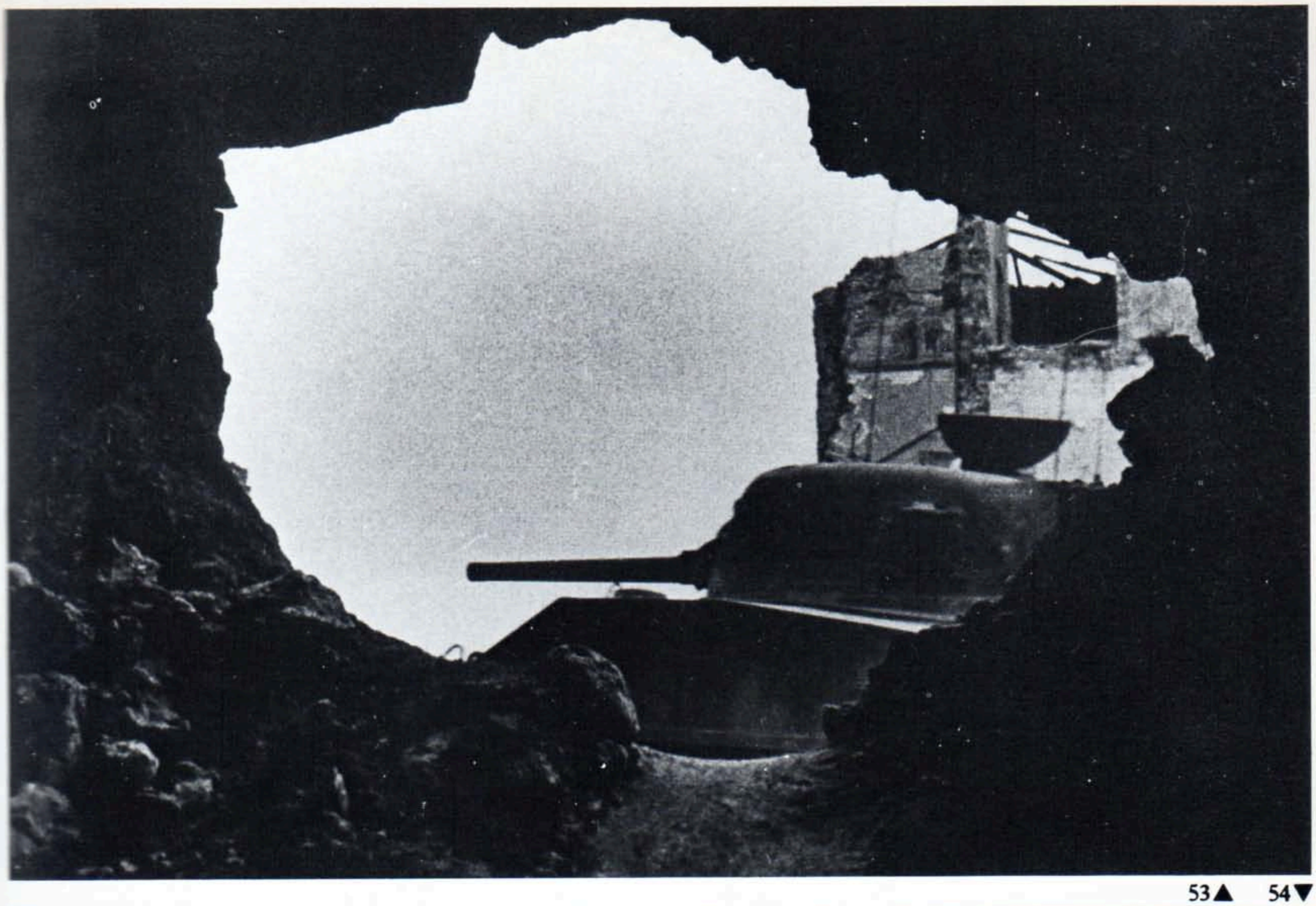

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55. After Cassino the division moved to the Apennine sector of the line, and following the fall of Rome it took part in the general advance which culminated in the capture of Florence. (New Zealand Official)
56. Whatever the reason for this Tiger's demise, be it Allied action or simply mechanical failure, it still occupies a great deal of the road's width and the German was too good a soldier not to mine the space that remained. The Sherman on the left has lost a track as it tried to edge past, the twisted link, track pin and crater all bearing witness to the explosion. With the road now completely blocked the Sherman has either reversed or been towed backwards, the track rolling off the drive sprocket. The enemy's rearguards were adept at imposing this sort of delay in order to break contact. (New Zealand Official)
57. A Sherman of the 19th Armoured Regiment receives a rapturous welcome from the citizens of Florence, 4 August 1944. The tank provides a good example of unit marking within the 4th New Zealand Armoured Brigade. The tactical number of the 18th Armoured Regiment was '51' and that of the 20th Armoured Regiment '53'. (New Zealand Official)
58. The reconnaissance troops of New Zealand armoured regiments – in this case the 19th Armoured Regiment – employed turretless Stuart light tanks. This example is seen at San Giorgio on 21 October 1944, the New Zealand Division having moved to the Adriatic sector for the battle of the Gothic Line. (New Zealand Official)

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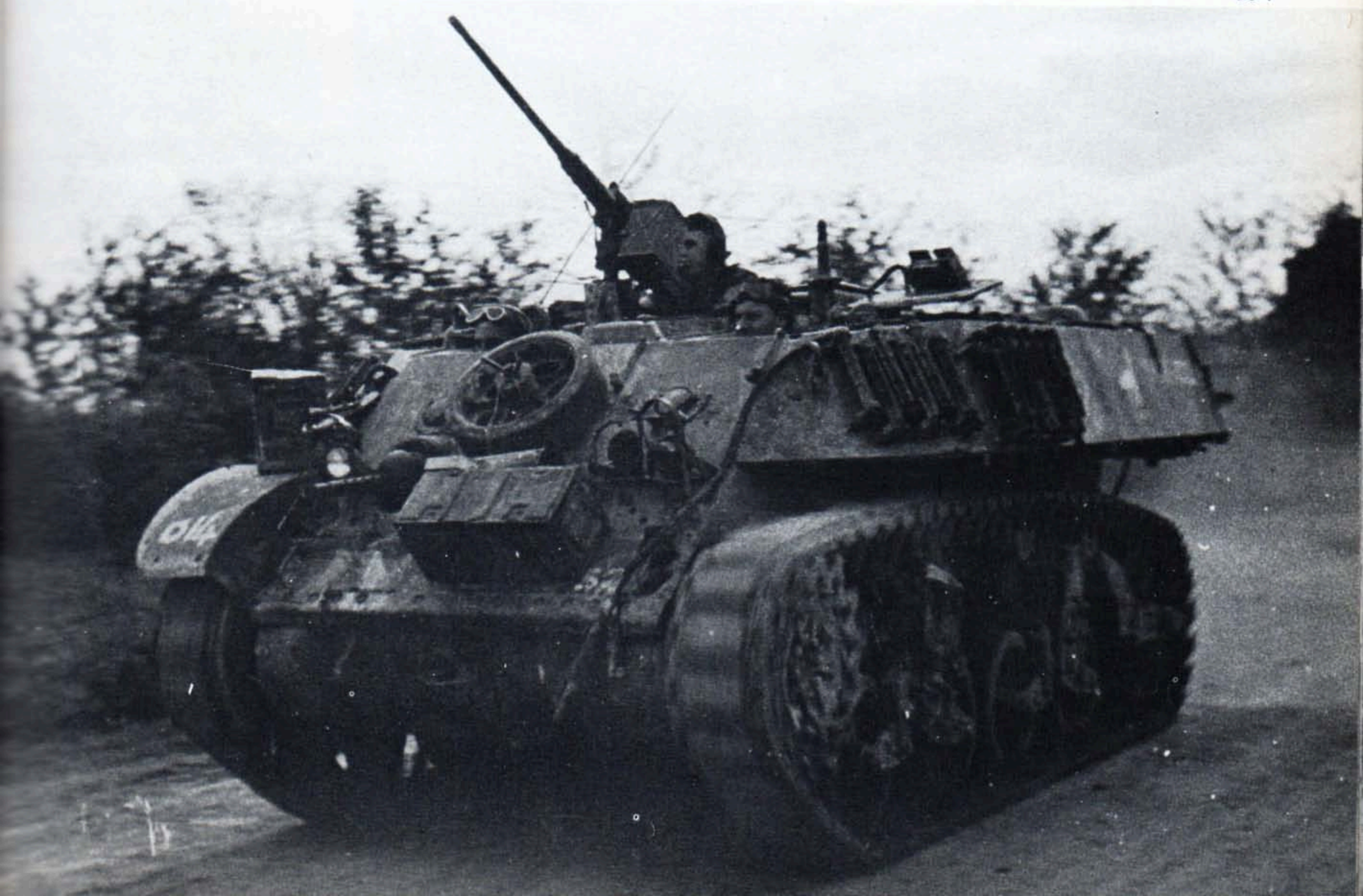

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59. A Stuart Recce of the 19th Armoured Regiment negotiates a cleared detour around a mined track, San Giorgio, 21 October 1944. According to the press release the girls are refugees being taken to safety; the fact that they are young and pretty and that there is one for each member of the crew is the merest coincidence! (New Zealand Official)

60. After the autumn battles the River Senio marked the division's front line throughout the winter of 1944–45. These Shermans of an unidentified New Zealand armoured regiment are carrying out a fully indirect shoot against targets beyond the river. The neatly erected bivouacs and generally methodical atmosphere suggest that the squadron has been here for some time and has settled in. (New Zealand Official)

61. New Zealand infantry and armour move up to attack Zagonara on 10 April 1945, the second day of the decisive Allied offensive in Italy. The infantry are probably the headquarters section of a company. The second and fourth men carry man-pack wireless sets of different types, one netted on to the company and the other on to the battalion frequency. The man between them is the company commander, who requires rapid access to both and who would also position himself beside his supporting tank troop leader's Sherman during the approach march. (New Zealand Official)

62. Watched by a Stuart Recce crew, a Sherman Firefly troop of the 20th Armoured Regiment hammers northward in pursuit of the broken enemy. On 22 April, when this photograph was taken, the 2nd New Zealand Division was at Budrio, near Bologna; when the war ended on 2 May it had reached Trieste. (New Zealand Official)

63. The first American tank to penetrate the streets of Gela, where the US II Corps' 1st Division landed during Operation 'Husky', the Allied invasion of Sicily. (USAMHI)

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64. Tanks and infantry of the US VI Corps stream ashore at Paestum in the Gulf of Salerno, 9 September 1943. Codenamed 'Avalanche', the operation provoked a swift enemy response and for a period came perilously close to disaster. (USAMHI)

65. Shermans fitted with deep wading extensions move along an LST's ramp towards the shore, Salerno, 9 September 1943. (USAMHI)

66. At the beach end of the ramp the tanks motor ashore through shallow water. The deep wading extensions seem totally unnecessary, but contingencies had to be allowed for. (USAMHI)

▲67 ▼68

67. An M4 burns after being hit by shellfire on the Cassino sector, 4 February 1944. The unit identification code on the bow blate, '5A 59F HQ 17', means 5th Army, 59th Field Artillery, HQ Company, 17th vehicle; from this it is possible to conclude that the tank is used by one of the 59th's FOOs to control the fire of his guns. Efficient monitoring of transmissions by the enemy could result in the FOO's own position being pinpointed and passed to the German artillery, who would then do everything possible to eliminate him. (USAMHI)

68. Tanks of the 13th Tank Battalion, 1st Armored Division, land dryshod from their LST in Anzio harbour, 27 April 1944. (USAMHI)

69. An M4A1 platoon of the 13th Tank Battalion moves inland to its bivouac area in the Anzio beach-head, 27 April 1944. The divisional and unit numbers, accompanied by the triangle markings of an armoured formation, can be seen on the stern plate of the nearest vehicle, just above the sledgehammer. (USAMHI)

70. A squad of riflemen belonging to the 6th Armored Infantry Battalion (1st Armored Division) pass the gutted wreck of an M4, 24 May 1944. The US VI Corps breakout from the Anzio perimeter is under way and the Albano Hills, one of the first objectives, can be seen in the background. (USAMHI)

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71. A recovery team prepares to winch a 191st Tank Battalion Sherman M4A1 aboard a transporter trailer. The photograph was taken on the 3rd Division's sector of the Anzio perimeter, near the ominously named Campo Morto. Note the gouges made by shell splinters in the tank's armour. (USAMHI)
72. 'Queenie One' of the 1st Armored Division moves out of an open leaguer during VI Corps' breakout from the Anzio beachhead. In open terrain a sapling like those stowed aboard several tanks here could be used as a prop for camouflage nets or bivouac sheets. In the background is an M31 recovery vehicle. (USAMHI)
73. An interesting photograph showing details of an open leaguer formed by a 1st Armored Division combat team during the advance from Anzio to Rome, Lanuvio, 30 May 1944. The nearest face of the leaguer is formed by an M10 tank destroyer platoon; to the left and right two M4 tank platoons are deployed to cover the flanks; whilst in the centre is the tank company's HQ platoon, an M3 half-track and the company fitters' recovery vehicle. (USAMHI)
74. An amphibious Sherman DD (officially Duplex-Drive but more commonly 'Donald Duck' to its American crews) of the 753rd Tank Battalion with its flotation screen lowered while training in Italy for Operation 'Anvil', the landings on the French Riviera which would take place on 15 August 1944. DDs formed part of the equipment of three tank battalions employed in this operation, the 191st, the 753rd and the 756th. (USAMHI)

74▼

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75. M4A1s of the 1st Tank Battalion, 1st Armored Division ('Old Ironsides'), fording the River Arne on 1 September 1944. As tanks invariably churned up the bottom it was customary to preserve a second lane for the use of wheeled vehicles only. (USAMHI)
76. A Sherman platoon of the 755th Tank Battalion moves into position near Pietromala and prepares to engage in the supplementary artillery role. The stowage board fixed across the glacis and the company codes painted on the turret in the British manner were common practice in this battalion. (USAMHI)
77. The 7.5-ton M8 Greyhound armoured car was capable of 55mph but was poorly protected against mine damage, the crew often lining the floor of their compartment with sandbags; the vehicle was armed with a 37mm gun and a co-axial machine gun. This example, named 'Argonaught' (*sic*), is seen on the Cassino sector and is most unusual in that it carries a full unit code *and* insignia on the bow plate, viz. '5A 91R A49' (5th Army, 91st Cavalry Reconnaissance Squadron, Mechanized, Troop A, 49th Vehicle). (USAMHI)
78. The 1st Armored Division's reconnaissance unit was Troop D, 81st Cavalry Reconnaissance Squadron, Mechanized, one of whose light tanks is seen pushing north shortly after the fall of Rome. (USAMHI)

78▼

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79. Expert demolition was used by the enemy as a means of delaying the final stages of the Allied advance on Rome. Only ten minutes before this Stuart of the 1st Armored Division arrived German engineers brought down the house on the left, hoping to block the street with the rubble. (USAMHI)

80. This neatly stowed Stuart M5A1 was the first American tank to cross the newly completed Huskie pontoon bridge over the Volturno, which remained under constant enemy fire. Note the weight restriction nailed to the tree. (USAMHI)

81. A 105mm Howitzer Motor Carriage M7 roars through the narrow streets of Gela, Sicily, 11 July 1943. Many Americans spoke Italian naturally as their second language and others still had relatives living in Sicily, all of which contributed to the spectacular success achieved by Maj. Gen. George S. Patton's US 7th Army in this short campaign. (USAMHI)

82. Engineers guide an M7 HMC over a pontoon bridge across the River Volturno, 13 October 1943. Nearby, the turret of a drowned M10 GMC tank destroyer protrudes from the water, suggesting that the river was recently fordable but has risen rapidly as a result of autumn rains in the hills. (USAMHI)

81▲ 82▼

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83. Once full elevation has been reached it is still possible to add to a gun's theoretical range by a technical process known to tank crews and self-propelled artillerymen as 'putting a brick under the front end'. This is what the crew of 'The Texas Special' have done as they fire in support of an infantry operation on the River Rapido on 22 January 1944. They seem to be keeping score of their kills, but the only item which can be clearly identified is a staff car. The photographer has caught the gun at the precise moment of firing. (USAMHI)

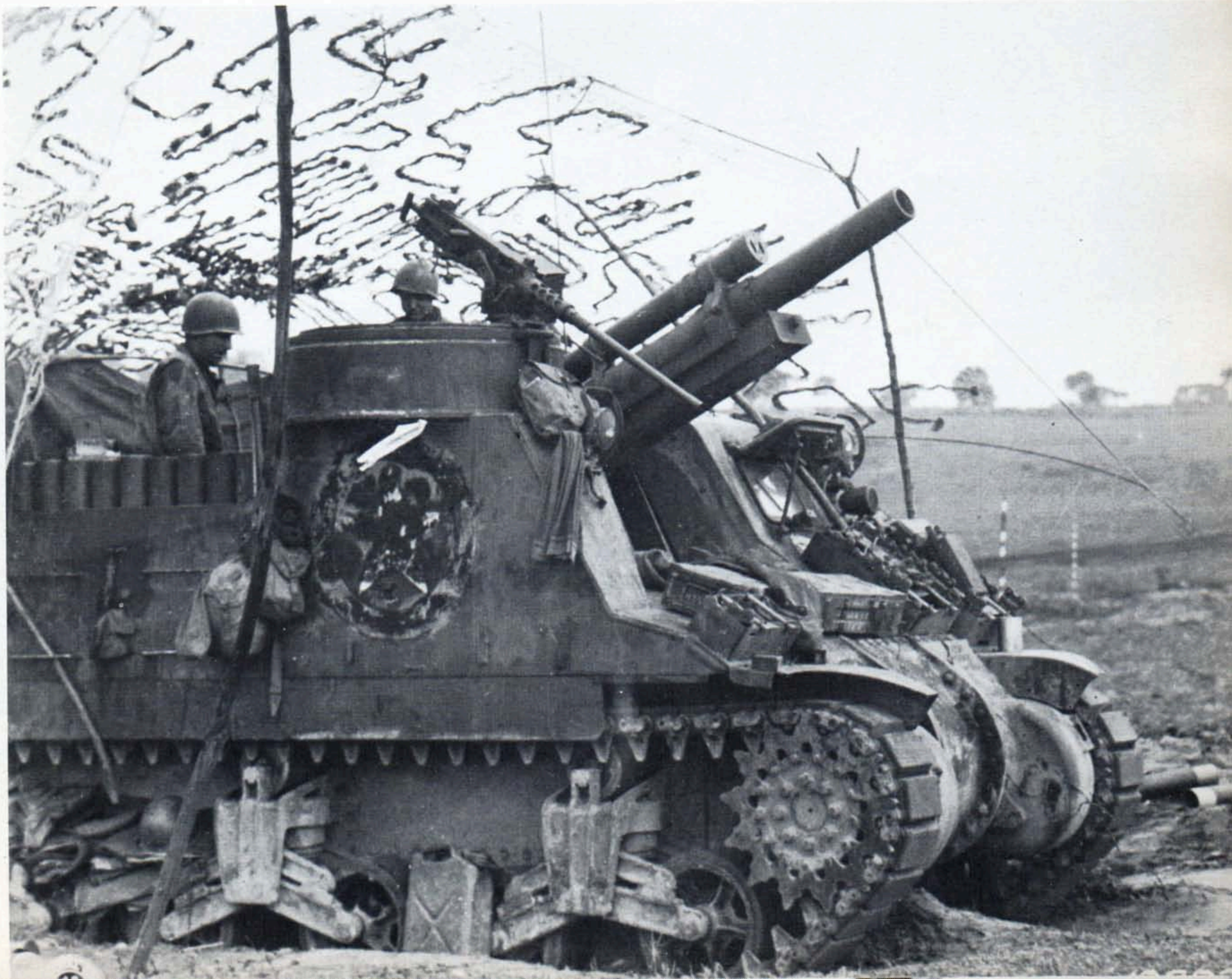
84. 'Anna's battery has obviously been doing a great deal of recent firing but has been stood down for the moment, although her radio operator remains on listening watch, taking advantage of the thin February sunshine. He is muffled against the cold and this, coupled with the rare erection of the M7's foul-weather canopy, conveys the strong impression that stripping off for a helmet-bath is not necessarily the fun it looks! This sort of glum scene is remembered by anyone who has ever been a soldier – and is certainly one he would rather forget! (USAMHI)

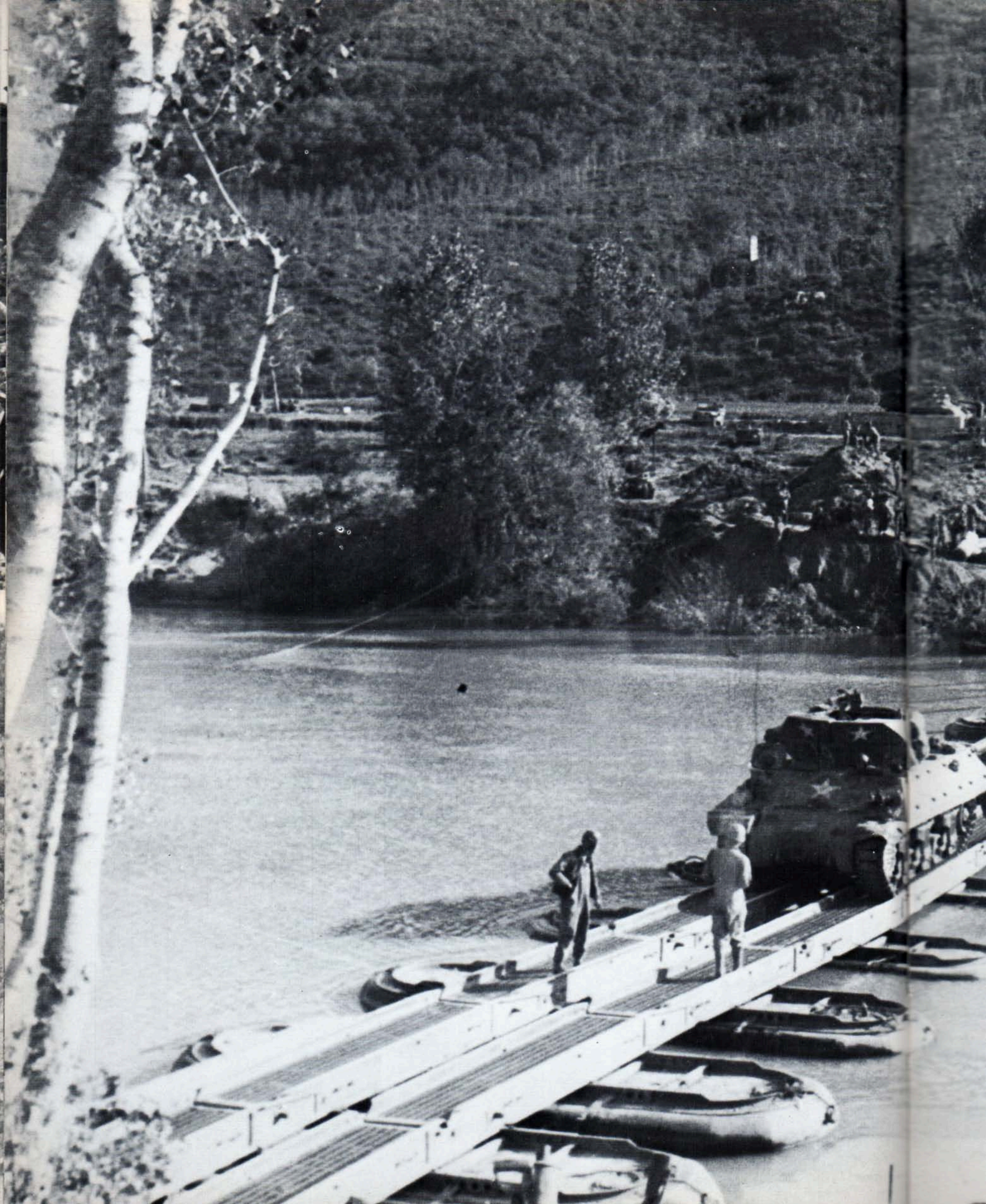
85. An M7 battery firing in support of the US 45th Infantry Division at the Anzio beach-head, 6 March 1944. The staggered gun-line was employed to reduce casualties caused by strafing or counter-battery action. On some vehicles a determined attempt has been made to eliminate the white recognition stars, which were visible from a considerable distance; on the nearest vehicle the weapon has reached the point of full recoil. (USAMHI)

86. A close-up of one of the vehicles firing in support of the 45th Division. All the signs of static warfare are present, yet curiously the photo provides an unusual example of a driver's vision block being fitted to an M7 HMC, together with its wiper unit. (USAMHI)

87. (**Next spread**) A 3in Gun Motor Carriage M10 of the 601st Tank Destroyer Battalion crosses the Volturno by means of a pontoon bridge. (USAMHI)

86▼





88. An interior view of an M7 HMC in action. As a fresh round is inserted into the breech the radio operator listens for corrections based on the fall of the last shell which will then be applied to the gun controls. The 105mm Howitzer M2A1 had a maximum range of 12,200yds. This vehicle belongs to the US 1st Armored Division, which possessed three Armored Artillery Battalions – the 27th, the 68th and the 91st. (USAMHI)

89. 'Bear Tracks', of the 27th Armored Artillery Battalion (1st Armored Division), in action against the enemy's rearguards as they withdraw north of Rome, 2 July 1944. The crew have had stowage rails welded to the sides of the vehicle and have secured their bivouac to one. (USAMHI)

90. An error of judgement has almost sent this M7 HMC plunging down the mountainside with what would almost certainly have been fatal consequences for the crew. The vehicle behind provides an anchor as the driver reverses out of trouble. (USAMHI)

91. The turret of the M10 tank destroyer was fitted with a counterweight at the rear to balance the 3in gun. The Tank Destroyer Force had been raised specifically to meet the threat posed by the German application of the Blitzkrieg technique, but in Italy it was the Allies who were attacking and the tank destroyers were employed in a variety of alternative roles including mobile anti-tank protection and supplementary artillery, as well as serving on occasion as assault guns. (USAMHI)

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92. An M10 of the 601st Tank Destroyer Battalion moving into position on the perimeter of the Anzio beach-head, 29 February 1944. In the counterattack role tank destroyers could either supplement the infantry's towed anti-tank guns or act as a substitute for the latter until they had been emplaced and dug in. (USAMHI)
93. The M10 could also be given an indirect fire capability by mounting a gunner's quadrant on the breech block. This platoon belonging to the 804th Tank Destroyer Battalion are subjecting targets in Sabbioni to a prolonged pounding, 8 October 1944. (USAMHI)
94. (**Next spread**) The tank destroyer crews prided themselves on being direct gunfire specialists with the ability to take out any German vehicle which dared to show itself on the opposite crest. Tank destroyer platoons often found themselves attached for long periods to units holding the line and made themselves as comfortable as the circumstances would permit. This crew, for example, have constructed a duckboard path to their dug-in vehicle, avoiding the worst of the mud. (USAMHI)

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95. The M31 Recovery Vehicle was a turretless Lee medium tank in which a boom and winch with a 60,000lb pull were mounted in what had formerly been the fighting compartment. This example is bringing home one of its more unusual customers – a German assault gun! (USAMHI)

96. The majority of operational accidents took place during movement along mountain tracks at night. The collapse of the verge has resulted in this tank rolling and taking the area's telephone lines with it. It has fortunately missed a horrific vertical drop by inches, but deaths and severe injuries arising from such accidents were commonplace. (USAMHI)

97. A bleak American strongpoint located in a mountain farm on the upper slopes of the Apennines. Present in this group of AFVs are three Shermans of the 752nd Tank Battalion (including one 76mm model), two M18 Hellcat tank destroyers and an M31 recovery vehicle. It is not certain what is taking place, but the vehicle on the right seems either to have broken down or to be bogged in, and is about to be towed forward by the combined efforts of the three vehicles nearest the camera to a point at which the M31 can recover it. The official caption tells us that the farm is also used as an artillery observation post and that the enemy are only 400yds distant, but long periods of 'live and let live' were commonplace when major operations were not in progress. The photograph is dated 11 December 1944 but no location is given. (USAMHI)

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98. 'Bull o' the Woods' is winched back to safety after running off the road during the night. By no means all recoveries were as simple and straightforward as this. (USAMHI)

99. Remarkably smart infantry and armour of II Polish Corps training behind the lines. II Corps served in Italy from 1943 to 1945, its most famous victory being the capture of Monastery Hill at Cassino. Its principal armoured formation was the 2nd Armoured Brigade, consisting of the 1st Lancers and the 4th and 6th Armoured Regiments, the Corps reconnaissance regiment being the Carpathian Lancers. Each of the three infantry divisions also possessed a reconnaissance regiment, as follows: 3rd Carpathian Rifle Division – 12th Lancers; 5th Kresowa Infantry Division – 15th Lancers; and 7th Infantry Division – Reverse Reconnaissance Unit. II Corps was organized and trained on British lines. The Sherman in the photograph has a stowage rail welded across the rear of the engine deck. (Sikorski Museum)

100. The figure on the right of this photograph is a traffic sentry posted to warn drivers to change right down when approaching this ice-covered hairpin bend, beyond which lies a sheer drop of several hundred feet into a quarry. The tank has not yet received a winter coat of whitewash, and this suggests that the photograph was taken some distance from the front. The tank belongs to the 2nd Polish Armoured Brigade. (Sikorski Museum)

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101. With the coming of spring, snow camouflage had to be removed quickly, for obvious reasons. This example shows the rapid brush-strokes with which the tank's original whitewash has been applied, leaving a gap around the name 'Phantom Ridge' on the sponson plate. Many tanks in II Polish Corps carried two names, a female name in small lettering on the turret and a place-name in larger lettering on the hull, commemorating a battle or location of particular significance in the unit's history. The tank commander is a captain whose rank is shown below the silver Polish eagle on his beret and repeated on his shoulder straps. The regimental badge, unfortunately indistinguishable in this case, is worn above the left temple. (Sikorski Museum)

102. One method of filling trenches and small water obstacles was provided by the ARK, a turretless Churchill with metal decking along the top of the hull, which was driven bodily into the obstacle and abandoned. Here a Sherman Firefly of C Squadron, 1st Krechowiecki Lancers, drives over the ARK, identified by the regiment's horse's head badge inside the squadron circle; all names and markings with the exception of the white ordnance number are in yellow. The tank commander is sporting a captured helmet and the vehicle is carrying a small fascine of its own on the glacis plate. (Sikorski Museum)

103. In April 1945 the 2nd Polish Armoured Brigade took part in the advance on Bologna. The fighting was heavy and the terrain criss-crossed by water obstacles, and in these circumstances the little Valentine bridgelayers were in great demand. As the photograph shows, the 30ft bridge was of the scissors type and was launched and recovered over the front of the vehicle by hydraulic rams; it could take vehicles weighing up to 30 tons. (Sikorski Museum)

104. Another method of filling trenches and smaller water obstacles was with a fascine, here carried by a Churchill AVRE (Armoured Vehicle Royal Engineers). The picture provides some interesting detail of the sledge on which the fascine rested before being released to topple into the obstacle. (Sikorski Museum)

103▲ 104▼

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105. Cratering roads to delay the Allied advance was common German practice, but by 1945 such irritations were dealt with quickly and easily by Sherman dozers. Although they are working on II Polish Corps' axis, these vehicles seem to be manned by personnel of the Royal Tank Regiment. (Sikorski Museum)
106. After the German surrender in Italy the 2nd Polish Armoured Brigade moved to Loreto and on 7 June 1945 was expanded to become the 2nd Warszawska Armoured Division. In August the entire division was reviewed by Field Marshal Earl Alexander of Tunis, regiments parading with their beautiful scarlet, white and gold standards, each surmounted by a silver Polish eagle. These are now carefully preserved by the Sikorski Museum in London. (Sikorski Museum)

▼106

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